REMARKS

The present amendment is submitted in response to the Office Action dated May 4, 2004, which set a three-month period for response, making this amendment due by August 4, 2004.

Claims 1, 2, 4-8, and 10-13 are pending in this application.

In the Office Action, claims 1, 2, 4, 5, 7, 8, 11, and 13 were rejected under 35 U.S.C. 102(b) as being anticipated by U.S. Patent No. 5,084,963 to Murray et al. Claim 13 was rejected under 35 U.S.C. 102(b) as being anticipated by Murray et al. Claims 6 and 12 stand rejected under 35 U.S.C. 103(a) as being unpatentable over Murray. Claim 10 was rejected under 35 U.S.C. 103(a) as being unpatentable over Murray in view of U.S. Patent No. 4,377,762 to Tatsumi et al.

In the present amendment, claim 1 has been amended to define that "axial dimensions of the deformation regions (18) are smaller than an axial dimension of the inner surface (14) of the ring magnet". Claim 1 has been further amended to add the feature that "a radius of the shaft increases at the edges of the at least two impressed features". This feature is disclosed in the specification on page 2, line 23, to page 3, line 3. Since the impressed features lie within the axial dimension of the inner surface of the magnetic ring, a rotationally fixed, non-positive connection between the ring and the shaft is assured.

With regard to the rejection of claim 13, the Applicants respectfully submit that the Examiner has misunderstood the feature "has a conical shape with round

surfaces perpendicular to an impression direction". In Figures 1 and 3 of the present application, clear deformation regions 18 with round base surfaces are shown, which, in connection with the cross section of Figure 2, are designated as conical deformation regions 18. These conical deformation regions 18 correspond to a conical recess in the shaft surface, whereby in this manner, a circular bulge or bead exists on the ring-shaped edge of the deformation region. This feature is shown in Figures 1, 2, and 3, as originally filed. Claim 13 has been amended accordingly to include this distinction.

In the Office Action, in paragraph 3, the Examiner states that Murray discloses that the connector 34, which is formed from deformable, electrically conductive material, for example, copper, can be used as a magnet. The Applicants respectfully disagree.

In physics, it is well known that merely the elements iron, cobalt and nickel have magnetic properties, such that they experience a force effect in a magnetic field. Thus, such materials (iron, cobalt, nickel) can be magnetized, such that they can be used as permanent magnets. With the good conductive material copper, this is not possible under any circumstances.

With a ring magnet is attached to a shaft, it is unambiguous to the practitioner that this ring magnetic has a changeable magnetic field over the periphery, which is produced by the alternating arrangement of magnetic south and north poles.

In this connection, permanent magnets are necessary, which have a changing magnetic field over the periphery that is permanent and independent

from a current feed of electrical coils. Such permanent ring magnets cannot be made of a copper material.

Thus, in the entire Murray reference, absolutely no suggestion of attaching a magnet to a shaft can be found. In contrast to soft, ductile copper, typical ring magnets for a worm shaft (for example, in an electric motor) are made from hard, brittle permanent-magnetic materials, for example, resin-bonded iron, whereby, first the connection device of the present invention is required. By means of the features added to claim 1, namely, that the edges of the deformation regions enlarge the shaft radius, it is evident that only minimal linear regions create a press fit to the ring magnets. Murray fails to provide any disclosure or suggestion of the formation of such an increase 19 of the edge of the deformation region, such as shown, for example, in Figure 2 of the present application.

Therefore, because amended claim 1 includes features not disclosed in the Murray reference, the rejection of claim 1 under Section 102 cannot be maintained. Anticipation requires the presence in a single prior art reference disclosure of each and every element of the claimed invention, arranged as in the claims. ***Lindemann Maschinenfabrik GmbH v. American Hoist & Derrick Co.***, 221 USPQ 481, 485 (Fed. Cir. 1984).

Amended claim 13 also is not anticipated over Tatsumi, since the "protuberances 18" extend over the entire longitudinal dimension of the "laminated core 720". Thus, for the axial securing the "laminated cores 720", also additional retaining rings 722, 724 are necessary, which, with the arrangement of the deformation regions according to the present invention, are eliminated within

the longitudinal dimension of the ring magnets. Also, with Tatsumi, the practitioner is provided with no teaching or suggestion of attachment a ring magnet to a shaft, since with the "laminated core 720", it operates merely as pressed-together metal disks, on which the armature coilings of the rotor are arranged.

With reference to the rejection of claim 13 under Section 4, the Applicants believe that the rejection actually was based on the Tatsumi reference. Amended claim 13, however, also is not anticipated nor made obvious by Tatsumi, since the practitioner would receive not suggestion, for example, in Figure 14 or Figure 15 that deformation regions (protuberances 18) would form a round base surface in the radial direction to the shaft (perpendicular to the impression direction), as is shown in Figures 1 and 3 of the present application. With Tatsumi, in Figure 3, a cross section through the shaft is shown, which illustrates that the longitudinal grooves 18 are formed as a shaft profiled along the periphery. From Figures 2 or 14, 15, however, is it clearly visible that these "protuberances 18" are formed as longitudinal grooves. Thus, a **"wedge-shaped"** depression is formed in the shaft 4, not, however, a **"conical"** depression.

Thus, the rejection of claim 13 under Section 102 cannot stand. For a prior art reference to anticipate a claim, the reference must disclose each and every element of the claim with sufficient clarity to prove its existence in the prior art. ***Motorola, Inc. v. Interdigital Tech. Corp.***, 43 USPQ 2d 1481, 1490 (Fed. Cir. 1997).

Therefore, also no circumferentially running edge is formed with these impressions on the edges, which would secure the press-fit with a ring magnetic against a longitudinal displacement. As set forth in amended claim 1, axial retaining rings 722 and 724 are arranged in Figures 14 and 15. Likewise, the "laminated core 720" does not represent a ring magnet, since the material used has not permanent-magnetic properties for an armature rotor.

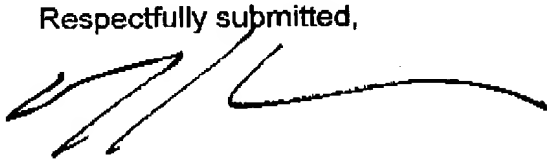
In addition, Murray provides no suggestion as to the subject matter of claim 13, since here, neither a ring magnet nor the formation of the deformation regions with a round base surface and a conical depression in a worm shaft is disclosed in this reference.

For the reasons set forth above, the Applicants respectfully submit that claims 1, 2, 4-8 and 10-13 are patentable over the cited art. The Applicants further request withdrawal of the rejections under 35 U.S.C. 102 and 103 and reconsideration of the claims as herein amended.

In light of the foregoing amendments and arguments in support of patentability, the Applicants respectfully submit that this application stands in condition for allowance. Action to this end is courteously solicited.

Should the Examiner have any further comments or suggestions, the undersigned would very much welcome a telephone call in order to discuss appropriate claim language that will place the application into condition for allowance.

Respectfully submitted,



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